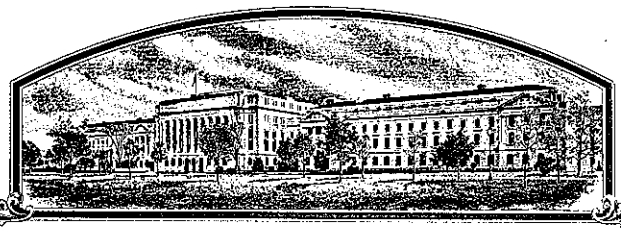
No. 8300013



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Delta and Pine Land Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Deltapine 497'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 28th *day of* November *in the year of our Lord one thousand nine hundred and* eighty-three.

Attest:

Kenneth A. Evans
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

John R Block
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

FORM APPROVED: OMB NO. 0581-0005

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION	3. VARIETY NAME
Delta and Pine Land Company	Deltapine 496	Deltapine 497

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*	5. PHONE *(Include area code)*
Scott, Mississippi 38772	601/742-3351

FOR OFFICIAL USE ONLY

PVPO NUMBER: 8300013

6. GENUS AND SPECIES NAME	7. FAMILY NAME *(Botanical)*
Glycine max	Leguminosae

FILING
DATE: 11/4/82
TIME: 2:30 ☐ A.M. ☒ P.M.

8. KIND NAME	9. DATE OF DETERMINATION
Soybean	November 1976

FEES RECEIVED
AMOUNT FOR FILING: $ 500.00
DATE: 11/4/82
AMOUNT FOR CERTIFICATE: $ 250.00
DATE: 11/16/83

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*

Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION	12. DATE OF INCORPORATION
Delaware	

13. NAME AND ADDRESS OF APPLICANT REPRESENATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Harry B. Collins
Delta and Pine Land Company
Scott, Mississippi 38772

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. ☒ Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*

b. ☒ Exhibit B, Novelty Statement

c. ☒ Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*

d. ☒ Exhibit D, Additional Description of the Variety

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act.)* ☐ Yes *(If "Yes," answer items 16 and 17 below)* ☒ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ Yes ☐ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? ☐ Foundation ☐ Registered ☐ Certified

18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S. OR OTHER COUNTRIES?
☐ Yes *(If "Yes," give names of countries and dates)*
☒ No

19. HAVE RIGHTS BEEN GRANTED IN THE U.S. OR OTHER COUNTRIES?
☐ Yes *(If "Yes," give names of countries and dates)*
☒ No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT	DATE
Harry B Collins	9-14-82
SIGNATURE OF APPLICANT	DATE

FORM LMGS-470 (9-81) (Edition of 1-78 is obsolete)

EXHIBIT A

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DELTAPINE 497

Origin and Breeding History of the Variety

Deltapine 497 originated from the cross Davis x N66-1136. N66-1136 was a North Carolina breeding line. The pedigree method of breeding was employed in selecting this variety. In 1976, an F4 plant row was bulked for yield testing in 1977. Two single plant selections were also selected from that F4 plant row and each was grown in a plant row in 1977. One of the two plant rows was bulked and increased. From 1977 on, concurrent yield testing and increasing of this line, then known as experimental strain Deltapine 496, was carried out. Observations and rogueing were conducted for three years on each increase generation through the year 1980. Based on these observations, Deltapine 497 is stable for all observable characteristics.

Based on yield data obtained in 1977, Deltapine 497 was included in more tests and locations in succeeding years. In 1981 Deltapine 497 was included in yield tests conducted by Delta and Pine Land Company personnel and by several state experiment stations in the Southeastern United States, the Mid-South and the Gulf Coast of Texas.

FREQUENCIES OF VARIANTS GIVEN UNDER EXHIBIT D. RJS 12/2/82

EXHIBIT B

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DELTAPINE 497

Novelty Statement

Deltapine 497 is most similar to the variety Bragg. The principal differences between Deltapine 497 and Bragg are foliage color, seed coat luster and seed coat color and seed size. The foliage of Deltapine 497 is a darker green (2.4) than the foliage of Bragg (1.8). The seed coat luster of Deltapine 497 is much duller (4.1) than that of Bragg (2.1). The seed coat color of Deltapine 497 (2.9) is a lighter yellow than that of Bragg (2.1). Deltapine 497 has smaller seed (3243 seed per pound) than Bragg (3131 seed per pound).

8300013

TABLE B I 1a

MID-LATE MERIT STRAIN TEST - SCOTT, MS - HEAVY SOIL - 1981

LUSTER - RJS. 2/9/83

Entry	Seed Coat ~~Color~~ 1/
Deltapine 497	4.0
Bragg	2.0
$LSD_{.05}$	0.4
$LSD_{.01}$	0.5
CV	17.2

1/ 1 = Very shiny
5 = Very dull

8300013

Table B I 1b

MID-LATE MERIT STRAIN TEST - SCOTT, MS - LIGHT SOIL - 1981

Entry	Seed Coat Luster[1/]
Deltapine 497	4.8
Bragg	2.9
$LSD_{.05}$	0.4
$LSD_{.01}$	0.6
CV	14.5

1/ 1 = Very shiny

5 = Very dull

8300013

TABLE B I lc

MID-LATE MERIT STRAIN TEST - WISNER, LA - HEAVY SOIL - 1981

Entry	Seed Coat Luster[1/]
Deltapine 497	3.8
Bragg	1.6
$LSD_{.05}$	0.7
$LSD_{.01}$	1.0
CV	25.9

1/ 1 = Very shiny

5 = Very dull

8300013

TABLE B I 1d

MID-LATE MERIT STRAIN TEST - JOINER, AR - HEAVY SOIL - 1981

Entry	Seed Coat Luster[1/]
Deltapine 497	5.0
Bragg	3.2
$LSD_{.05}$	0.9
$LSD_{.01}$	1.2
CV	18.4

1/ 1 = Very shiny

5 = Very dull

83 00013

TABLE B I 1k

MID-LATE MERIT STRAIN TEST - TUNICA, MS - HEAVY SOIL - 1981

Entry	Seed Coat Luster[1/]
Deltapine 497	4.5
Bragg	2.8
$LSD_{.05}$	0.6
$LSD_{.01}$	0.8
CV	14.1

1/ 1 = Very shiny

5 = Very dull

8300013

TABLE B I 2a

MID-MATURITY MERIT STRAIN TEST - SCOTT, MS - HEAVY SOIL - 1980

Entry	Seed Coat Luster[1/]
Deltapine 497	3.4
Bragg	1.6
$LSD_{.05}$	0.4
$LSD_{.01}$	0.6
CV	20.8

1/ 1 = Very shiny

5 = Very dull

8300013

TABLE B I 2d

MID-MATURITY ADVANCED STRAIN TEST - SCOTT, MS - HEAVY SOIL - 1980

Entry	Seed Coat Luster[1/]
Deltapine 497	3.4
Bragg	1.4
$LSD_{.05}$	0.6
$LSD_{.01}$	0.8
CV	19.8

1/ 1 = Very shiny

5 = Very dull

8300013

TABLE B I 2e

MID-MATURITY ADVANCED STRAIN TEST - SCOTT, MS - LIGHT SOIL - 1980

Entry	Seed Coat Luster[1/]
Deltapine 497	4.0
Bragg	1.0
$LSD_{.05}$	0.8
$LSD_{.01}$	1.0
CV	22.3

1/ 1 = Very shiny

5 = Very dull

8300013

TABLE B I 2f

MID-MATURITY MERIT STRAIN TEST - COLUMBIA, N.C. - BLACKLAND PEAT SOIL - 1980

Entry	Seed Coat Luster[1/]
Deltapine 497	3.8
Bragg	2.4
$LSD_{.05}$	0.8
$LSD_{.01}$	1.0
CV	24.4

1/ 1 = Very shiny

5 = Very dull

TABLE B I
AVERAGE DATA FOR 24 TESTS CONDUCTED IN MISSISSIPPI, LOUISIANA, ARKANSAS, NORTH CAROLINA, AND SOUTH CAROLINA IN 1979, 1980, AND 1981

	Deltapine 497	Bragg	Difference
Flower Color[1/]	W	W	No
Pubescence Color[2/]	T	T	No
Plant Height (cm)	106.5	104.2	+2.3
Height 1st Pod From Ground (cm)	12.9	12.7	+0.2
Date of Maturity	10-31	10-29	+2
Lodging[3/]	1.5	1.8	-0.3
Metribuzin Reaction[4/]	1.3	1.6	-0.3
Foliar Feeding Insect Damage[5/]	2.4	2.3	+0.1
Foliage Color[6/]	2.4	1.8	+0.6
Protein Content (%)	40.1	39.7	+0.4
Oil Content (%)	19.0	20.4	-1.4
Weight gm/100 Seed	14.0	14.5	-0.5
Seed Quality Rating[7/]	1.5	1.2	+0.3
Seed Coat Luster[8/]	4.1	2.1	+2.0
Seed Coat Color[9/]	2.9	2.1	+0.8
Hilum Color	Bl	Bl	No

1/ P = Purple
W = White

2/ T = Tawny
G = Grey

3/ 1 = No lodging
5 = Severe lodging

4/ 1 = Very tolerant
5 = Plants killed

5/ 1 = No feeding
5 = Completely skeletonized

6/ 1 = Very light green
5 = Very dark green

7/ 1 = Very good quality
5 = Very poor quality

8/ 1 = Very shiny
5 = Very dull

9/ 1 = Deep yellow
5 = Light yellow

TABLE B I 1
AVERAGE DATA FOR 14 TESTS CONDUCTED IN MISSISSIPPI, LOUISIANA, ARKANSAS, NORTH CAROLINA, AND SOUTH CAROLINA IN 1981

	Deltapine 497	Bragg	Difference
Flower Color[1/]	W	W	No
Pubescence Color[2/]	T	T	No
Plant Height (cm)	105.8	103.4	+2.4
Height 1st Pod From Ground (cm)	13.0	12.8	+0.2
Date of Maturity	10-29	10-26	+3
Lodging[3/]	1.6	1.9	-0.3
Metribuzin Reaction[4/]	1.3	1.6	-0.3
Foliar Feeding Insect Damage[5/]	2.4	2.3	+0.1
Foliage Color[6/]	2.4	1.8	+0.6
Weight gm/100 Seed	13.0	13.5	-0.5
Seed Quality Rating[7/]	1.6	1.3	+0.3
Seed Coat Luster[8/]	4.4	2.5	+1.9
Seed Coat Color[9/]	3.0	2.5	+0.5
Hilum Color	Bl	Bl	

1/ P = Purple
W = White

2/ T = Tawny
G = Grey

3/ 1 = No lodging
5 = Severe lodging

4/ 1 = Very tolerant
5 = Plants killed

5/ 1 = No feeding
5 = Completely skeletonized

6/ 1 = Very light green
5 = Very dark green

7/ 1 = Very good quality
5 = Very poor quality

8/ 1 = Very shiny
5 = Very dull

9/ 1 = Deep yellow
5 = Light yellow

TABLE B I 2
AVERAGE DATA FOR 6 TESTS CONDUCTED IN MISSISSIPPI, ARKANSAS, AND NORTH CAROLINA IN 1980

	Deltapine 497	Bragg	Difference
Flower Color[1/]	W	W	No
Pubescence Color[2/]	T	T	No
Plant Height (cm)	108.1	103.7	+4.4
Height 1st Pod From Ground (cm)	11.8	12.5	-0.7
Date of Maturity	11-6	11-5	+1
Lodging[3/]	1.5	1.4	+0.1
Protein Content (%)	40.1	39.7	+0.4
Oil Content (%)	19.0	20.4	-1.4
Weight gm/100 Seed	15.2	15.7	-0.5
Seed Quality Rating[4/]	1.3	1.1	+0.2
Seed Coat Luster[5/]	3.7	1.7	+2.0
Seed Coat Color[6/]	2.7	1.6	+1.1
Hilum Color	Bl	Bl	No

1/ P = Purple
W = White

2/ T = Tawny
G = Grey

3/ 1 = No lodging
5 = Severe lodging

4/ 1 = Very good quality
5 = Very poor quality

5/ 1 = Very shiny
5 = Very dull

6/ 1 = Deep yellow
5 = Light yellow

TABLE B I 3
AVERAGE DATA FOR 4 TESTS CONDUCTED IN
MISSISSIPPI AND ARKANSAS IN 1979

	Deltapine 497	Bragg	Difference
Flower Color[1/]	W	W	No
Pubescence Color[2/]	T	T	No
Plant Height (cm)	106.8	107.8	-1.0
Height 1st Pod From Ground (cm)	14.1	12.3	+1.8
Date of Maturity	10-28	10-26	+2
Lodging[3/]	1.2	1.8	-0.6

1/ P = Purple
W = White

2/ T = Tawny
G = Grey

3/ 1 = No lodging
5 = Severe lodging

FORM APPROVED: OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.*)*

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Delta and Pine Land Company	Deltapine 496	Deltapine 497

ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*

Scott, Mississippi 38772

FOR OFFICIAL USE ONLY

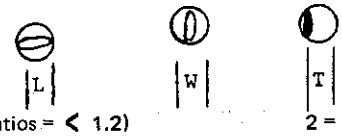
PVPO NUMBER

8300013

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]).

1. SEED SHAPE:

[1]



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

2. SEED COAT COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other *(Specify)* _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[1] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

4. SEED SIZE: (Mature Seed)

[1][4] Grams per 100 seeds

5. HILUM COLOR: (Mature Seed)

[6] 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other *(Specify)* _____

6. COTYLEDON COLOR: (Mature Seed)

[2] 1 = Yellow 2 = Green

7. SEED PROTEIN PEROXIDASE ACTIVITY:

[–] 1 = Low 2 = High

8. SEED PROTEIN ELECTROPHORETIC BAND:

[–] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

9. HYPOCOTYL COLOR:

[1] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

10. LEAFLET SHAPE:

[3] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other *(Specify)* _____

17

11. LEAFLET SIZE:

[2] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17')
3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[2] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton')
3 = Dark Green ('Gnome'; 'Tracy')

13. FLOWER COLOR:

[1] 1 = White 2 = Purple 3 = White with purple throat

14. POD COLOR:

[1] 1 = Tan 2 = Brown 3 = Black

15. PLANT PUBESCENCE COLOR:

[2] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[2] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton')
3 = Bushy ('Gnome'; 'Govan')

17. PLANT HABIT:

[1] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will')
3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

18. MATURITY GROUP:

[1][0] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V
9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

[0] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

[0] Bacterial Blight *(Pseudomonas glycinea)*

[0] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

[0] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

[0] Race 1 [0] Race 2 [0] Race 3 [0] Race 4 [0] Race 5 [0] Other *(Specify)* _____

[0] Target Spot *(Corynespora cassiicola)*

[0] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[0] Powdery Mildew *(Microsphaera diffusa)*

[0] Brown Stem Rot *(Cephalosporium gregatum)*

[2] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)*

18

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

[2] Pod and Stem Blight *(Diaporthe phaseolorum* var; *sojae)*

[2] Purple Seed Stain *(Cercospora kikuchii)*

[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma* var. *sojae)*

[1] Race 1 [1] Race 2 [0] Race 3 [0] Race 4 [0] Race 5 [0] Race 6 [0] Race 7

[0] Race 8 [0] Race 9 [0] Other *(Specify)* _____

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

[0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

[2] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

[1] Race 1 [1] Race 2 [1] Race 3 [1] Race 4 [_] Other *(Specify)* _____

[0] Lance Nematode *(Hoplolaimus Colombus)*

[0] Southern Root Knot Nematode *(Meloidogyne incognita)*

[0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[0] Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[_] OTHER DISEASE NOT ON FORM *(Specify):* _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Iron Chlorosis on Calcareous Soil

[_] Other *(Specify)* _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[0] Potato Leaf Hopper *(Empoasca fabae)*

[0] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Bragg	Seed Coat Luster	Deltapine 105
Leaf Shape	Bragg	Seed Size	Deltapine 506
Leaf Color	Deltapine 506	Seed Shape	Bragg
Leaf Size	Bragg	Seedling Pigmentation	Bragg

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
Submitted	10-31	1.5	106.5	-	-	40.1	19.0	-	-
Bragg Name of Similar Variety	10-29	1.8	104.2	-	-	39.7	20.4	-	-

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

EXHIBIT D

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DELTAPINE 497

Additional Description of the Variety

Deltapine 497 is a group VII maturity soybean variety which matures approximately two days later than Bragg. It has white flowers, a tawny pubescence, and a tan pod wall. The foliage is medium in color and darker than Bragg. The leaves of Deltapine 497 are ovate in shape. The seed coat is very dull and the seed coat color is medium yellow. The hilum color is black. The seed of Deltapine 497 (3243 seed per pound) is similar to Deltapine 506 (3243 seed per pound) in size. Deltapine 497 has larger seeds than Centennial (3363 seed per pound) and Deltapine 246 (3550 seed per pound) and smaller seeds than Bragg (3131 seed per pound). Deltapine 497 (40.1%) is similar to Centennial (40.4%) in protein content, and higher in protein content than Deltapine 246 (39.8%), Bragg (39.7%), and Deltapine 506 (39.1%). Deltapine 497 (19.0%) is lower in oil content than Deltapine 246 (21.5%), Bragg (20.4%), Deltapine 506 (19.9%), and Centennial (19.8%). Deltapine 497 does not exhibit hypocotyl resistance to Phytophthora megasperma (races 1 and 2) which causes Phytophthora root rot but has exhibited field resistance. Deltapine 497 is taller (106.5 cm) than Bragg (104.2 cm), Deltapine 506 (98.9 cm), Centennial (92.3 cm), and Deltapine 246 (76.0 cm).

As stated above, Deltapine 497 has white flowers. Deltapine 497 has up to one (1) plant with purple flowers in 2,000 plants. Deltapine 497 has a tawny pubescence with up to one (1) plant with grey pubescence in 2,000 plants. Deltapine 497 has a black hilum with no more than one (1) seed in 2,000 with a color other than black.